

CURRICULUM VITAE, Web Version

COLLINS, Laurel Smith

Professor

Department of Earth and Environment, and Department of Biological Sciences

Florida International University

Miami, Florida 33199

EDUCATION

Ph.D. Geology and Geophysics, Yale University

M. Phil. Geology and Geophysics, Yale University

M.S. Geology, George Washington University

B.S. Geology, University of Maryland

RECENT PROFESSIONAL ACTIVITIES AND APPOINTMENTS

- 2012-present Graduate Program Director for Geosciences and Earth Systems Science, Department of Earth and Environment, FIU
- 2005-present Director, Board of Directors, Cushman Foundation for Foraminiferal Research
- 1999-present Member, Latin American and Caribbean Center Associate Faculty, FIU
- 1993-present Research Associate, Smithsonian Tropical Research Institute, Panama
- 1990-present Database Director and Web Site Manager, Panama Paleontology Project
- 2014-2016 Councilor At Large, Elected, Paleontological Society
- 2013-2014 Member, Organizing Committee for 10th North American Paleontological Convention, and NAPC Symposium *The Microfossil Record: The Past is the Key to the Future (or Present) in Conservation Paleobiology*
- 2011-2012 President, Sigma Xi The Scientific Research Society, FIU Chapter
- 2008-2011 Founding Member and Treasurer, FIU Chapter of Sigma Xi, The Scientific Research Society
- 2009 Co-organizer of technical session *Coastal Problems, Micropaleontological Approaches*, annual meeting of Geological Society of America, Portland, Oregon
- 2009 President, Cushman Foundation for Foraminiferal Research
- 2008 Vice President, Cushman Foundation for Foraminiferal Research
- 2004-2008 Member, Miami Museum of Science, Collections Task Force, Museum Science Advisory Council
- 2003-2006 Executive Editor, *Journal of Foraminiferal Research*
- 2005-2006 Mentor, McNair Scholars Program, Florida International University
- 2005-2006 Co-chairperson, symposium in honor of Dr. Martin A. Buzas, FORAMS 2006 international meeting, Natal, Brazil
- 2002-2006 Panelist, NSF Graduate Research Fellowships Program
- 2001-2006 Associate Director, Florida International University Undergraduate Mentoring in Environmental Biology Program

RECENT AWARDS

- 2014 Elected Fellow of the Paleontological Society
2010 Top Scholars 2010 Award, Office of the Provost, Florida International University
2003 Excellence in Teaching Award , FIU Foundation

PROFESSIONAL AFFILIATIONS

Cushman Foundation for Foraminiferal Research, patron
North American Micropaleontological Society, member
Paleontological Society, Fellow
SEPM (Society for Sedimentary Geology), member
Sigma Xi, member

STUDENTS' DEGREE COMMITTEES

- 2013-present Advisor for Zoe Verlaak, Ph.D. student, Geosciences
2012-present Advisor for Maria Sider, Ph.D. student, Geosciences
2011-present Advisor for Philip Lamela, Ph.D. student, Geosciences
2008-present Advisor to Crystal Pletka, Ph.D. candidate, Geological Sciences, FIU
2008-2013 Committee Member for Tatiana Gaona-Narvaez, Ph.D. candidate, Geological Sciences, FIU
2008-2012 Advisor to Ozlem Gurocak-Orhun, B.S. Geology Honors, FIU
2001-2010 Advisor to Jacqueline Powell, Ph.D. candidate, Geological Sciences, FIU
2010 Advisor to Francesca-Maria Mineo, Biological Sciences, FIU
2006-2008 Advisor to Carly Smith, M.S. 2008, Geological Sciences, FIU
2003-2009 Advisor to Anna Wachnicka, Ph.D. 2009, Geological Sciences, FIU
2003-2010 Advisor to Jie Cheng, Ph.D. 2010, Geological Sciences, FIU
2003-2007 Committee Member for Peter Horst, Ph.D. 2007, Geological Sciences, FIU
2004-2007 Advisor to Lizette Leon Rodriguez, M.S. 2007, Geological Sciences, FIU
2001-2006 Advisor to Sreepat Jain, Ph.D. 2006, Geological Sciences, FIU
2003-2006 Committee Member for Camilo Ponton, M.S. 2006, Geological Sciences, FIU
2003-2005 Committee Member for Adam Wood, M.S. 2005, Biological Sciences, FIU
2001-2005 Committee Member for James Watling, Ph.D. 2005, Biological Sciences, FIU
1999-2004 Committee Member for Daniel Spector, M.A. 2004, Earth Sciences, FIU
1996-1998 Committee Member for Marta Sjoevall, M.S. 1998, Geological Sciences, FIU
1995-1996 Advisor to Suzanne Havach, B.S. 1995, honors senior thesis, University of Michigan

RECENT TEACHING, FIU (/ = courses cross-listed between departments)

- 2014 Co-instructor, *Geoscience Systems*, graduate course, Dept. Earth & Environment, 3 credits, every two years.
2014-present Co-instructor, *Field Excursion* and *Advanced Field Excursion*, upper level undergraduate and graduate field course, 3 credits, every two years.
2007-present Instructor, *Principles of Paleobiology/Paleobiology/Advanced Paleontology*,

- upper level undergraduate course and graduate courses in Department of Earth Sciences and Department of Biological Sciences, 3 credits. Every two years.
- 2006-present Instructor, *Earth Through Time*, required upper level undergraduate course in Department of Earth Sciences, 3 credits. Every spring semester.
- 2001-present Co-instructor, *Workshop: Microfossil Paleoenvironments/ Workshop: Paleoecology of South Florida*, graduate course in Department of Earth Sciences and Department of Biological Sciences, 2 credits. Every two spring semesters.
- 2001-present Professor of Record, *The History of Life Laboratory*, undergraduate non-majors laboratory course in Department of Earth Sciences, 1 credit. Every third semester.
- 2000-present Instructor, *The History of Life*, undergraduate non-majors course in Department of Earth Sciences, 3 credits. Every third semester.
- 1999-present Instructor, *Paleoecology and Paleoenvironments/ Ecosystems of the Past/ Environments of the Past*, upper level undergraduate and graduate courses in Department of Earth Sciences and Department of Biological Sciences, 3 credits. Every two years.
- 2011 Instructor, *Senior Seminar*, Biological Sciences, 1 credit.
- 2007-2013 Instructor, *Planet Earth: Evolving Earth*, required introductory graduate course in Department of Earth Sciences, 1 credit, every two years.
- 2005 Instructor, *Topics in Paleobiology: Surveying Natural Populations*, graduate statistics course in Department of Earth Sciences and Department of Biological Sciences, 1 credit. Summer A term.
- 2004-2005 Instructor, *Topics in Paleobiology*, graduate course in Department of Earth Sciences, 1 credit. Some terms.
- 2002-2004 Course Coordinator and Co-instructor, *UMEB: Environmental Biology and Geology of Central America*, undergraduate course with 3 weeks of field instruction in Panama, in Department of Earth Sciences and Department of Biological Sciences, 3 credits. Summer A term.
- 2002-2004 Course Coordinator and Co-instructor, *UMEB: Environmental Biology and Geology of Central America Laboratory*, undergraduate course in Department of Earth Sciences and Department of Biological Sciences, 1 credit. Summer B term.

ARTICLES PUBLISHED, PEER-REVIEWED JOURNALS

- 2013 O’dea, A., and **Collins, L.S.** (Editors). Environmental, Ecological and Evolutionary Change in Seas Across the Isthmus of Panama. *Bulletin of Marine Science*, v. 89, no. 4, p. 769-1035.
- 2013 O’dea, A., and **Collins, L.S.** Introduction, in O’dea, A., and Collins, L.S. (Eds.), Environmental, Ecological and Evolutionary Change in Seas Across the Isthmus of Panama. *Bulletin of Marine Science, Special Issue*, v. 89, no. 4, p. 769-777.
- 2013 Smith, C.J., **Collins, L.S.**, and Hayek, Lee-Ann. Biogeographic effects of the closing Central American Seaway on benthic foraminifera of Venezuela. *Bulletin of Marine Science, Special Issue “Environmental, Ecological and Evolutionary Change in Seas Across the Isthmus of Panama,”* O’Dea, A., & Collins, L.S. (Eds.), v. 89, no. 4, 921-936.
- 2012 Fourqurean, J.W., Kendrick, G.A., **Collins, L.S.**, Chambers, R.M., and Vanderklift, M.A. Carbon, nitrogen and phosphorus storage in subtropical seagrass meadows: examples from Florida Bay and Shark Bay. *Marine and Freshwater Research*, 63: 967-983.

- 2012 Cheng, J., **Collins, L.S.**, and Holmes, C. Four thousand years of habitat change in Florida Bay, as indicated by benthic foraminifera. *Journal of Foraminiferal Research*, v. 42, no. 1, pp. 3 -17.
- 2011/2013 Wachnicka, A., **Collins, L.S.**, and Gaiser, E. Response of diatom assemblages to 130 years of environmental change in Florida Bay (USA). *Journal of Paleolimnology*, v. 49, no. 1, pp. 83-101, DOI 10.1007/s10933-011-9556-3. [Published online 2011, published in print 2013]
- 2011/2013 Wachnicka, A., Gaiser, E., and **Collins, L.S.** Correspondence of historic salinity fluctuations in Florida Bay, USA, to atmospheric variability and anthropogenic activities. *Journal of Paleolimnology*, v. 49, no. 1, pp. 103-115, DOI 10.1007/s10933-011-9534-9. [Published online 2011, published in print 2013]
- 2010 Smith, Carly J., **Collins, L.S.**, Jaramillo, C., and Quiroz, L.I. Marine paleoenvironments of Neogene formations of north-central Falcón State, Venezuela. *Journal of Foraminiferal Research*, v. 40, no. 3, p. 566-582.
- 2010 Wachnicka, A., Gaiser, E., **Collins, L.S.**, Frankovitch, T., and Boyer, J. Distribution of diatoms and development of diatom-based models for inferring salinity and nutrient concentrations in Florida Bay (U.S.A.) and adjacent coastal wetlands. *Estuaries and Coasts*, v. 33, p. 1080-1098, DOI 10.1007/s12237-010-9283-4.
- 2007 Jain, S., and **Collins, L.S.** Trends in Caribbean paleoproductivity related to the Neogene closure of the Central American Seaway. *Marine Micropaleontology*, v. 63, pp. 57-74.
- 2007 Jain, S., **Collins, L.S.**, and Hayek, L.-A. Relationship of benthic foraminiferal diversity to paleoproductivity in the Neogene Caribbean. *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 255, p. 223-245.
- 2007 **Collins, L.S.** Chapter 18. Micropaleontology of Central America, p. 1-17 in Bundschuh, J., and Alvarado, G.E. (Editors), *Central America – Geology, Hazards and Resources*, v. 2: Taylor and Francis, Leiden, The Netherlands, 1436 pp.
- 2005 Coates, A.G., McNeill, D.F., Aubry, M.-P., Berggren, W.A., and **Collins, L.S.** An introduction to the geology of the Bocas del Toro Archipelago, Panama. *Caribbean Journal of Science*, v. 41, no. 3, pp. 374-391.
- 2004 Coates, A.G., **L.S. Collins**, M.-P. Aubry, and W.A. Berggren. The geology of the Darien, Panama, and the late Miocene-Pliocene collision of the Panama arc with northwestern South America. *Geological Society of America, Bulletin*, v. 116, no. 11/12, pp. 1327-1344.
- 2003 Coates, A.G., M.-P. Aubry, W.A. Berggren, **L.S. Collins**, and M. Kunk. Early Neogene history of the Central American arc from Bocas del Toro, western Panama. *Geological Society of America, Bulletin*, v. 115, no. 3, pp. 271-287.
- 2002 Buzas, M.B., **L.S. Collins**, and S.J. Culver. Latitudinal difference in biodiversity caused by higher tropical rate of increase. *Proceedings of the National Academy of Sciences*, v. 99, no. 12, pp. 7841-7843.
- 2002 Cunningham, K. J., and **L.S. Collins**. Controls on facies and sequence stratigraphy of an upper Miocene carbonate ramp and platform, Melilla basin, NE Morocco. *Sedimentary Geology*, v. 146, 285-304.
- 1999/2000 **Collins, L.S.**, and A.G. Coates (Editors). A Paleobiotic Survey of Caribbean Faunas from the Neogene of the Isthmus of Panama. *Bulletins of American Paleontology*, no. 357: 351pp. [Dated 1999, published 2000]
- 1999/ **Collins, L.S.** The Miocene to Recent diversity of Caribbean benthic foraminifera from

- 2000 the Central American Isthmus. *In* Collins, L.S., and Coates, A.G. (editors), A Paleobiotic Survey of Caribbean Faunas from the Neogene of the Isthmus of Panama. *Bulletins of American Paleontology*, no. 357: 91-107. [Dated 1999, published 2000]
- 1999/ **Collins, L.S.**, O. Aguilera, P.F. Borne, and S.D. Cairns. A paleoenvironmental analysis of the Neogene of Caribbean Panama and Costa Rica using several phyla. *In* Collins, L.S., and Coates, A.G. (editors), A Paleobiotic Survey of Caribbean Faunas from the Neogene of the Isthmus of Panama. *Bulletins of American Paleontology*, no. 357: 81-87. [Dated 1999, published 2000]
- 1999/ **Collins, L.S.**, and A.G. Coates. Introduction. *In* Collins, L.S., and Coates, A.G. (editors),
2000 A Paleobiotic Survey of Caribbean Faunas from the Neogene of the Isthmus of Panama. *Bulletins of American Paleontology*, no. 357: 5-13. [Dated 1999, published 2000]
- 1999 **Collins, L.S.** Micropaleontology. *In* 1998 Geoscience Highlights. *Geotimes*, v. 44(7): 46-47.
- 1998 **Collins, L.S.** Micropaleontology. *In* 1997 Geoscience Highlights. *Geotimes*, v. 43 (2): 46-47.
- 1997 Havach, S.M, and **L.S. Collins**. The distribution of Recent benthic foraminifera across habitats of Bocas del Toro, Caribbean Panama. *Journal of Foraminiferal Research*, v. 27 (3): 232-249.
- 1996 **Collins, L.S.**, A.F. Budd, and A.G. Coates. Earliest evolution associated with closure of the Tropical American Seaway. *Proceedings of the National Academy of Sciences*, v. 93: 6069-6072.
- 1996 **Collins, L.S.**, A.G. Coates, W.A. Berggren, M.-P. Aubry, and J. Zhang. The late Miocene Panama isthmian strait. *Geology*, v. 24, no. 8: 687-690.
- 1996 **Collins, L.S.**, and T. M. Collins. Evolution of Life. *In* E.J. Dasch (ed.), *Encyclopedia of Earth Sciences*. Macmillan Reference USA, New York: 552-555.
- 1996 **Collins, L.S.** Environmental changes in Caribbean shallow waters relative to the closing Tropical American Seaway. *In* J.B.C. Jackson, A.G. Coates, and A.F. Budd (eds.), *Evolution and Environment in Tropical America*. U. Chicago Pr.: 130-167.
- 1995 **Collins, L.S.**, A.G. Coates, J.B.C. Jackson, and J.A. Obando. Timing and rates of emergence of the Limón and Bocas del Toro basins: Caribbean effects of Cocos Ridge subduction?. *In* P. Mann (ed.), *Geologic and Tectonic Development of the Caribbean Plate Boundary in southern Central America*. *Geological Society of America, Special Paper*: 263-289.
- 1993 **Collins, L.S.** Neogene paleoenvironments of the Bocas del Toro Basin, Panama. *Journal of Paleontology*, v. 67: 699-710.
- 1993 Jackson, J.B.C., P. Jung, A.G. Coates, and **L.S. Collins**. Diversity and extinction of tropical American molluscs and emergence of the Isthmus of Panama. *Science*, v. 260: 1624-1626.
- 1992 Coates, A.G., J.B.C. Jackson, **L.S. Collins**, T.M. Cronin, H.J. Dowsett, L. Bybell, P. Jung, and J.A. Obando. Closure of the Isthmus of Panama: the near-shore marine record of western Panama and Costa Rica. *Geological Society of America, Bulletin*, v. 104: 814-828.
- 1991 **Collins, L.S.** Regional vs. physiographic effects on morphologic variability within *Bulimina aculeata* and *B. marginata*. *Marine Micropaleontology*, v. 17: 155-170.
- 1990 **Collins, L.S.** The correspondence between water temperature and coiling direction in *Bulimina*. *Paleoceanography*, v. 5 (3): 289-294.

- 1989 **Collins, L.S.** Relationship of environmental gradients to morphologic variation within *Bulimina aculeata* and *B. marginata*, Gulf of Maine area. *Journal of Foraminiferal Research*, v. 19 (3): 222-234.
- 1989 **Collins, L.S.** Evolutionary rates of a rapid radiation: the Paleogene planktic foraminifera. *Palaios*, v. 4: 251-263.
- 1989 Buzas, M.A., **L.S. Collins**, S.L. Richardson, and K. Severin. Experiments on predation, substrate preference and colonization of benthic foraminifera at the shelfbreak off the Ft. Pierce Inlet, Florida. *Journal of Foraminiferal Research*, v. 19 (2): 146-152.
- 1989 Johnson, C., **L.S. Collins**, and E.G. Kauffman. Rudistid biofacies across the El Abra carbonate platform (Albian-Cenomanian), Northeastern Mexico. *Proceedings of the 11th Caribbean Geological Conference, July 1986*: 1:1-1:12.
- 1988 **Collins, L.S.** Faunal structure of a mid-Cretaceous rudist reef core. *Lethaia*, v. 21 (3): 271-280.
- 1987 Culver, S.J., M.A. Buzas, and **L.S. Collins**. On the value of taxonomic standardization in evolutionary studies. *Paleobiology*, v. 13: 169-176.

RECENT PRESENTATIONS

- 2014 Sider, Maria N., and **Collins, L. S.** 2014. Comparison of fossil and modern benthic foraminiferal assemblages to assess Recent environmental changes in coastal Bocas del Toro, Panama: *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 46, no. 6, p. 144.
- 2014 **Collins, L.S.**, Hallock, P., Pletka, C.R., and Beck, K.D. Environmental Impact of the Deepwater Horizon Oil Spill on Deep-sea Benthic Foraminifera. 10th North American Paleontological Convention, Gainesville, Florida, in press.
- 2013 **Collins, L.S.**, Hayek, L.-A., and Wachnicka, A. Integrated analysis of microfossil and physical indicators of anthropogenic and natural environmental changes in Florida Bay. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 45, no. 7, p. 531. [Wachnicka was Collins' student]
- 2012 **Collins, L.S.**, Hallock, P., Pletka, C.R., and Beck, K.D. Deep-water Foraminiferal Response to the Catastrophic Deepwater Horizon Well Oil Spill, Northeastern Gulf of Mexico. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 44, no. 7, p. 219. [Pletka and Beck were Collins' students]
- 2011 **Collins, L.S.**, Cheng, J., and Fourqurean, J. Seagrass foraminifera of Florida Bay: Proxy for water quality through time. Proceedings, 21st Biennial Conference of the Coastal and Estuarine Research Federation, Daytona Beach Florida, Nov. 6–10, p. 44.
- 2010 **Collins, L.S.**, Ogg, J., Aubry, M.-P., Berggren, W.A., Coates, A.G., and Pletka, C.R. The Panama Paleontology Project Database: Using *TimeScale Creator* for Automatic Age Updates to Paleontological Collections. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 42, no. 5, p. 461. [Pletka is Collins' Ph.D. student]
- 2009 Cheng, J., **Collins, L.S.**, Holmes, Charles W., and Fourqurean, James W. Seagrass abundance of Florida Bay, Using Foraminifera as a Proxy. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 41, no. 7, p. 236. [Cheng was Collins' Ph.D. student]
- 2009 Garcia Inguanti, C., Gurocak-Orhun, O., Matthews, F.A., **Collins, L.S.**, and O'Dea, A. Miocene Foraminiferal Biofacies Along the Caribbean Coast of Northwest Panama.

- Geological Society of America Annual Meeting, Abstracts with Programs*, v. 41, no. 7, p. 153. [Garcia, Gurocak-Orhun and Matthews were Collins' undergraduate students]
- 2009 Gurocak-Orhun, O., and **Collins, L.S.** Paleoenvironments of the Upper Miocene Tuira Formation, Darien, Panama. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 41, no. 7, p. 153. [Gurocak-Orhun is Collins' B.S. Honors student]
- 2009 **Collins, L.S.** Paleobiogeographic comparisons of benthic foraminifera from the Panama Paleontology Project. 9th North American Paleontological Convention, June 21-26, 2009, Abstracts. *Cincinnati Museum Center Scientific Contributions*, no. 3, p. 376.
- 2009 Coates, A.G., **Collins, L.S.**, and O'Dea, A. The Panama Paleontology Project (PPP), a Jacksonian legacy. 9th North American Paleontological Convention, June 21-26, 2009, Abstracts. *Cincinnati Museum Center Scientific Contributions*, no. 3, p. 374.
- 2009 **Collins, L.S.**, and Smith, C.J. Paleobiogeographic changes in benthic foraminifera associated with the closure of the Central American Seaway. *4th International Conference of the International Biogeography Society*, Jan. 8-12, 2009, Merida, Mexico, p. 16. [Smith was Collins' M.S. student]
- 2009 Wachnicka, A., Gaiser, E., **Collins, L.**, and L. Wingard. Impact of Anthropogenic and Natural Factors on Environmental Conditions in South Florida Estuaries, *11th International Paleolimnology Symposium*, Guadalajara, Jalisco, Mexico. [Wachnicka was Collins' M.S. student]
- 2009 Wachnicka, A., Gaiser, E., **Collins, L.**, and L. Wingard. Learning from Fossil Diatom Records about Past Environmental Conditions in Two Subtropical South Florida Estuaries, *20th North American Diatom Symposium*, Milford, Iowa. [Wachnicka was Collins' M.S. student]
- 2008 Cheng, Jie, and **Collins, L.S.** Using benthic foraminifera to understand seagrass abundance, salinity and sea level variation in Florida Bay. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 40, no. 802-12. [Cheng was Collins' Ph.D. student]
- 2008 Smith, Carly J., and **Collins, L.S.** Biogeographic comparisons of Neogene benthic foraminifera of Venezuela, Panama and Ecuador. *Geological Society of America Annual Meeting, Abstracts with Programs*, v. 40, no. 806-10. [Smith was Collins' M.S. student]
- 2008 Cheng, Jie, and **Collins, L.S.** Using benthic foraminifera to understand seagrass abundance, salinity and sea level variation in Florida Bay. *Abstracts Volume, AAPG 2008 Annual Convention and Exhibition*, v. 17, p. 30. [Cheng was Collins' Ph.D. student]
- 2008 **Collins, L.S.** Miocene paleobiogeography of Caribbean vs. Eastern Pacific benthic foraminifera during closure of the Central American Seaway. *Abstracts and Program, 18th Caribbean Geological Conference, March 24-29, 2008, Santo Domingo, Dominican Republic*, p. 17.
- 2008 Smith, Carly J., and **Collins, L.S.** Paleoenvironmental analysis of the Miocene Urumaco Formation, Falcón state, Venezuela, using benthic foraminifera. *Abstracts and Program, 18th Caribbean Geological Conference, March 24-29, 2008, Santo Domingo, Dominican Republic*, p. 68. [Smith was Collins' M.S. student]